CLAIMS

What is claimed is:

Sub. b 1. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well;

a computerized controller for directing the operation of said cooking appliance and for receiving, storing and retrieving data, said controller including means for compensating for the introduction of a new cooking medium by adjusting the sensed temperature of said new cooking medium by a predetermined and programmable amount over a select number of cooking cycles.

2. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a

temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well;

a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for compensating for oil stratification.

3. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well; and

a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for compensating for a variation in operation of said cooking appliance, said means for compensating comprising detecting a drop in temperature of the cooking medium and initiating a cook cycle based upon said detection.

4. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well; and

a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for adjusting the duration of a cook cycle according to a non-linear compensation according to the formula

A raised to the power $((B \times \Delta_{TEMPERATURE})/C)$

a product multiplier

where A = ~~1.41421, for example~~

a derived compensation multiplier

where B = ~~2, for example~~

where C = exponential growth and,

$\Delta_{TEMPERATURE}$ = Product Reference Temperature - Sensed Cooking Medium Temperature.

5. A method for cooking a food item comprising the steps of:

loading a food item into a cooking medium in the cooking well of a cooking appliance;

heating the cooking medium to a reference temperature;

adjusting the cook time according to a non-linear, exponential compensation, said compensation comprising the formula

A raised to the power ((B x $\Delta_{TEMPERATURE}$)/C)

where A = ~~1.41421, for example.~~ a product multiplier;

where B = ~~2, for example~~ a temperature compensation multiplier;

where C = exponential growth and,

$\Delta_{TEMPERATURE}$ = Product Reference Temperature - Sensed Cooking Medium Temperature.

6. A food item cooked according to a process comprising the steps of:

loading a food item into a cooking medium in the cooking well of a cooking appliance;

heating the cooking medium to a reference temperature;

adjusting the cook time according to a non-linear, exponential compensation, said compensation comprising the formula

A raised to the power ((B x $\Delta_{TEMPERATURE}$)/C)

where A = ~~1.41421, for example~~ a product multiplier;

where B = ~~2, for example~~ a temperature compensation multiplier;

where C = exponential growth and,

$\Delta_{TEMPERATURE}$ = Product Reference Temperature - Sensed Cooking Medium Temperature.

7. An improved cooking appliance, comprising:

~~a cooking appliance including~~ a cooking well for retaining a cooking medium and food to be cooked therein, at least one heating element for selectively heating the cooking medium, and a temperature sensing device for sensing the temperature of a portion of the cooking medium at a certain position in said cooking well; and

a computerized controller for directing the operation of said cooking appliance and for receiving, storing, and retrieving data, said controller including means for conducting cooking appliance performance checks through manipulation and display of information that has been received and stored by said controller.